

## Featured Article



### Agriculture in the Northwest

Northwest agriculture is incredibly diverse and is vital for the economy, contributing billions of dollars and creating thousands of jobs every year. This article summarizes how climate change and its causes will impact agriculture by changing precipitation patterns, increasing temperatures, and affecting plant productivity.

## Drought Update

This summer has been exceptionally warm and dry, after a cool, wet start. Much of Idaho and Oregon are experiencing drought conditions, although drought severity and extent are significantly improved compared to this time last year. The recent Northwest heatwave exacerbated fire weather conditions in Idaho, Oregon, and Washington. Abnormally dry conditions (D0-yellow) expanded in northern and central Idaho, and moderate drought (D1-tan) crept northward into central Idaho. Precipitation has been below average for this time of year throughout most of Idaho, Oregon, and Washington. The area west of the Cascades has experienced more humid conditions than normal, with isolated storm activity in western Washington.

In Alaska, recent precipitation supported the removal of an abnormally dry area (D0-yellow) in the Yukon Flats. An area of abnormally dry conditions (D0-yellow) has developed across portions of the Tanana Valley between Delta Junction and Tok, where precipitation was less than half of normal for August.



National Integrated Drought Information System



CoCoRHaS Community Rain Hail Snow Network

Condition Monitoring Observer Reports - Drought

### U.S. Drought Monitor USDA Northwest Climate Hub

September 13, 2022  
(Released Thursday, Sep. 15, 2022)  
Valid 8 a.m. EDT



	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	75.74	24.26	15.79	7.75	3.90	0.16
Last Week (8-29-2022)	79.42	20.58	12.75	7.75	3.90	0.16
3 Months Ago (6-14-2022)	49.63	50.37	22.01	8.40	5.02	0.23
Start of Calendar Year (1-1-2022)	74.10	25.90	23.79	15.09	6.81	2.01
Start of Water Year (9-28-2021)	70.14	29.86	27.67	24.87	18.54	7.83
One Year Ago (9-14-2021)	70.14	29.86	27.95	25.53	19.30	8.15

**Intensity:**  
None (White), D0 Abnormally Dry (Yellow), D1 Moderate Drought (Tan), D2 Severe Drought (Orange), D3 Extreme Drought (Red), D4 Exceptional Drought (Dark Red)

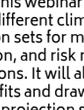
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/about.aspx>

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[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

## Webinars



**Selecting Climate Change Projection Sets for Mitigation, Adaptation, and Risk Management Applications, 19-20 September, 8-9:30 am or 12-1:30 pm PT.** This webinar series will explain different climate projection sets for mitigation, adaptation, and risk management applications. It will also highlight the benefits and drawbacks of different projection sets. The webinar is hosted by the NASA Applied Remote Sensing Training Program.

**September 2022 National Weather Service Alaska Climate Outlook Briefing, 16 September, 12-1 pm AKDT.** Join for the 100th Alaska Climate Outlook Briefing! Special guests will help introduce and provide background about this webinar milestone. Rick Thoman will review recent climate conditions around Alaska and discuss the Climate Prediction Center's forecast for October and winter 2022. Learn what's happened and what may be in store for Alaska's seasonal climate.



**October 2022 National Weather Service Alaska Climate Outlook Briefing, 21 October, 12-1 pm AKDT.** This briefing will review recent and current climate conditions around Alaska, and discuss forecast tools and the Climate Prediction Center's forecast for November 2022. Join the gathering online to learn what's happened and what may be in store for Alaska's seasonal climate.

**Pacific Northwest Drought Early Warning System: October Drought and Climate Outlook, 24 October, 11 am -12 pm PT.** This webinar provides timely, regional information on current drought status and impacts. It will include a preview of current and developing climatic events and two speakers. Speaker topics focus on management actions, latest tools, and research on snow, water, forestry, rangelands, or agriculture.

## Information



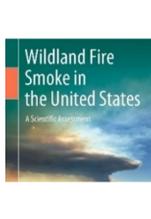
**Navigating the Northwest Climate Hub Website**  
This article helps visitors navigate the Northwest Climate Hub website. From general climate change information to specific management actions, we have something for everyone!



**Projections of Hydroclimatic Extremes in Southeast Alaska**  
This research paper explores climate model projections to understand future precipitation patterns in southeast Alaska, particularly future patterns of extreme precipitation events.



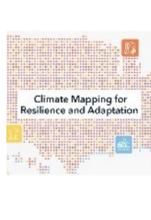
**Idaho Soil Health**  
This StoryMap discusses the importance of soil health for plant health and farm economics, gives examples of how to test soil health, and provides resources for farmers. Healthy soil will help crops be more resilient in the face of climate change.



**Biodiversity Cover Cropping in Potatoes**  
This case study discusses a farmer's experience using a biofumigant cover crop to add organic matter, improve soil quality, suppress disease and nematodes in potatoes, and reduce carbon dioxide output.



**Tribal Climate Adaptation Guidebook**  
This guidebook is now available via an online interface. It provides a framework for climate change adaptation planning in the context of existing Tribal priorities and considers the unique issues facing Indigenous communities.



**Wildland Fire Smoke in the United States**  
This open-source book documents the current understanding of smoke science, addresses the issues surrounding the production of smoke from wildland fires, and provides a roadmap for improving smoke and fire management.



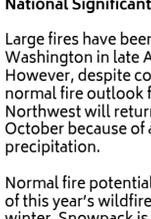
**USDA Assistance for Underserved Farmers & Ranchers Guide**  
This multi-agency guide provides assistance and targeted opportunities available to underserved populations. The guide is available in several languages.



**Climate Mapping for Resilience and Adaptation Portal**  
This website provides a dashboard to help communities see extreme weather and other hazards from climate change, while also providing maps projecting impacts to each community in the future.



**Challenges with Renewable Energy and How Biofuels Can Help**  
This article from Agriculture Climate Network discusses the challenges with running a power grid from only renewable energy and how certain biofuels can help to fill in gaps from wind, hydropower, and solar energy.



**Climate Science Blog Survey**  
AgClimate Network's editorial team wants to provide climate science information that you find useful. They are looking for feedback from agriculture and natural resource professionals in WA, OR, and ID through a short survey (10 - 15 minutes).



**National Significant Wildland Fire Potential Outlook**  
Large fires have been active across Idaho, Oregon, and Washington in late August and early September. However, despite continued drought and an above-normal fire outlook for September, most areas of the Northwest will return to normal fire potential in October because of an expected increase in precipitation.

Normal fire potential is expected in Alaska for the end of this year's wildfire season and into the first half of winter. Snowpack is expected to begin building in October, which will bring the end of wildfire activity in Alaska.

## Opportunities



**ORISE Biochar Communications Fellowship with the Rocky Mountain Research Station.** The fellow selected for this project will connect science with managers, decisionmakers, and the public by developing communication materials related to biochar. The fellow will support efforts to move biochar implementation from development and proof-of-concept toward widespread adoption. The fellow will also engage with other science topics, including climate change, forestry, wildlife, agriculture, and rangelands. **Applications due 20 September.**



**ORISE Communications Fellowship with the Western Wildland Environmental Threat Assessment Center (WWETAC).** The fellow selected will translate science and develop WWETAC communication materials, such as newsletters, briefing papers, web content, infographics, presentations, and webinars. The fellow will report to the director of WWETAC and will be mentored by a vibrant and dedicated team of WWETAC and associated Forest Service staff. This fellowship offers a unique opportunity to build skills in science delivery, public relations, communications, and outreach. **Applications due 27 September by 12 pm PT.**



**Post-Doctoral Position in Boundary Spanning and Knowledge Co-Production for Community Climate Resilience.** The Alaska Center for Climate Assessment and Policy is seeking a highly innovative and energetic interdisciplinary scientist with interest and aptitude in bridging science and practice, partnerships between researchers and local knowledge, and/or actionable science to join their team. **Open until filled.**

## Workshops & Conferences



**Alaska Climate Adaptation Community of Practice meeting, 27-28 September, Anchorage, AK.** This workshop is open to all practitioners who are working with and in communities across Alaska to provide data, decision tools, technical tools, funding, and other types of support to address the changing climate. This workshop will provide a venue to share and learn from other practitioners. This is an in-person event and travel support is available.



**Reforestation Pipeline in the Western United States, 27-29 September, Missoula, MT.** Large-scale reforestation is one proposed solution to mitigate the effects of climate change. This conference will be a place to discuss the potential challenges to reforestation in the western United States. This is a joint annual meeting for the Western Forest and Conservation Nursery Association, Intertribal Nursery Council, and Intermountain Container Seedling Growers' Association.



**Climate Resilience Training for Oregon Agricultural Professionals, Wednesday throughout October, 9:30-11:30 am PST.** The Oregon Climate and Agricultural Network is hosting a series of virtual trainings that increase knowledge of technical service providers to support growers in their efforts to mitigate and adapt to climate change. Registration is now open.



**Tribal Clean Energy Summit, 4-5 October, Washington, DC.** Tribal leaders are invited to join U.S. Secretary of Energy Jennifer M. Granholm for a nation-to-nation roundtable to discuss how the U.S. Department of Energy can strengthen tribal energy sovereignty. The Biden Administration wants to ensure tribal participation in the Nation's transition to a clean energy future. Many federally recognized tribes have already begun working towards tribal clean energy sovereignty, stronger economies, and addressing climate change challenges, and this summit will discuss how to further this progress.



**Tribal Climate Adaptation 101 Training, 4-6 October, Fairbanks, AK.** This interactive workshop, led by the International Arctic Research Center, introduces planning for climate change impacts in Alaska and is intended for Tribal Climate Resilience Coordinators and Environmental Professionals that are beginning or new to climate change adaptation planning.



**Pacific Northwest Drought and Human Health Workshop, 19-20 October, Portland, OR.** This workshop is tailored to regional drought-related human health impacts and will help identify gaps and needs, collaborative opportunities, and ways to integrate the health sector into existing drought activities. The audience for this workshop will be state and local public health departments, climate scientists, emergency managers, Tribal communities, and healthcare providers.



**Oregon and Washington Water Year 2022 Recap and 2023 Outlook Meeting, 25-26 October.** The goal of this meeting is to share and gather information regarding climate impacts during the 2022 water year. The focus will be on the continuing drought in some areas, flooding in the fall of 2021, and the exceptionally wet spring. This meeting will also offer the opportunity to learn from others about mitigation actions that were taken. Both days will include time for discussion and peer-to-peer learning, in addition to hearing from forecast experts on what to expect for 2023.



**National Adaptation Forum, 25-27 October, Baltimore, MD.** The National Adaptation Forum provides an opportunity for attendees to make their work climate informed, share what they have learned with others, and explore innovative adaptation approaches. It is a professional development event that aims to expand the network of all attendees striving to be climate informed. The 5th National Adaptation Forum will continue to bring together individuals from a wide spectrum of sectors and regions integrating climate adaptation planning into their day-to-day activities.



**Annual SageCon Summit, 2-3 November, Burns, OR and online.** SageCon is an opportunity for local, state, and federal partners to work towards rangeland resilience in southeastern Oregon and across the Great Basin. The summit will include discussions on the status and trends of sage grouse populations in Oregon, and strategies for addressing invasive annual grasses in the region.



**Tribes & Climate Change Conference, 8-9 November, Shelton, WA.** The Native Cases Initiative conference focuses on Washington Tribes and climate change. The agenda includes Native cases, panels, and presentations on various Tribal actions to combat climate change and promote climate justice. The conference will also feature several new case studies on the cutting edge of current climate issues in Indian Country.



**2022 Affiliated Tribes of Northwest Indians Tribal Leaders Climate Change Summit, 29-30 November, Spokane, WA.** The Summit will engage Tribal leaders, citizens, staff, youth and collaborators in conversation about navigating the cultural, economic, and social challenges of climate change. This summit provides a forum for discussion among Tribal communities on the front lines of climate change, and an opportunity to discuss how Tribal sovereignty and co-management can advance climate action. Discounted registration is available until November 1.

## Podcast



**For the Love of Farming** is a podcast to connect the listener to small-scale farmers and ranchers. They share their wisdom, lessons learned, and their love of farming. This is a project by the Oregon State University Extension, Small Farms Program.



In the latest episode, "Wolf Gulch Farm with Maud Powell", Maud shares her views on adaptation to a changing climate and severe drought conditions. With over 20 years of farming experience, Maud and her husband share their successes and challenges of farming in Little Applegate Valley.

## Funding Opportunities

### September

**On-Farm Conservation Innovation Trials.** On-Farm Trials help to stimulate the adoption and evaluation of innovative conservation practices in partnership with agricultural producers. Applications will be accepted from eligible entities for projects addressing at least one of the following priorities: irrigation management technologies; climate-smart agricultural solutions; nutrient management; and soil health demonstration trials. On-Farm Trials durations may be between 3 and 5 years in project. **Applications due 22 September.**

**Grazing Lands Conservation Initiative Grants.** This program expands access to conservation technical assistance for livestock producers and increases the use of conservation practices on grazing lands. Projects must address local natural resource concerns, use climate-smart agriculture and forestry practices, encourage partnerships for advancing the resource needs of underserved communities, or identify and implement strategies to measure and report conservation benefits associated with grazing management systems. **Applications due 22 September.**

**Wetland Reserve Enhancement Partnership.** Wetlands can reduce climate change impacts by improving water quality, mitigating flood impacts, and enhancing wildlife habitat. USDA's Natural Resources Conservation Service is prioritizing proposals that support efforts to mitigate climate change by restoring wetlands while also prioritizing assistance to underserved communities. **Applications due 23 September.**

**Partners for Fish and Wildlife Program.** This is a voluntary, incentive-based program that provides direct technical and financial assistance to private landowners to restore and conserve fish and wildlife habitat for the benefit of federal trust resources. Project work plans are developed strategically, in coordination with partners, and with substantial involvement from U.S. Fish and Wildlife field staff. Program strategic plans inform the types of projects funded under this opportunity. **Applications due 30 September.**

**Coastal Habitat Restoration and Resilience Grants for Underserved Communities.** Coastal resilience will be crucial to protecting communities that will be threatened by sea-level rise with climate change. The National Oceanic and Atmospheric Administration is providing \$10 million for opportunities for underserved communities, Tribes, and/or Tribal entities to engage in coastal habitat restoration activities. These funds will help enhance resilience of underserved communities in marine, estuarine, coastal, and Great Lakes areas. **Applications due 30 September.**

### October

**Environmental Justice Thriving Communities Technical Assistance Centers Program.** Underserved communities will be disproportionately impacted by climate change. This center will help eligible applicants establish centers across the nation providing technical assistance, training, and related support to communities with environmental justice concerns and their partners. **Applications due 4 October.**

**Sunny Awards for Equitable Community Solar Program.** This program will recognize community solar projects and programs that develop or employ best practices to increase equitable access to the benefits of community solar for subscribers and their communities. These benefits include energy burden reduction, low- and moderate-income household access, increased resilience, community ownership, and equitable workforce development. Up to \$100,000 in total prizes and several special recognition awards will be shared with prize winners. **Applications due 7 October.**

**Community Wildfire Defense Grant Program.** These grants are intended to help at-risk local communities and Tribes plan and reduce the risks of wildfires. Priority will be given to at-risk communities in areas identified as having high or very high wildfire hazard potential, low income, and/or areas that have been impacted by a severe disaster. Grants will be funded for the development and revision of Community Wildfire Protection Plans and the implementation of projects described in a Community Wildfire Protection Plan that is less than ten years old. **Applications due 7 October.**

**Conservation Innovation Grants (CIG) Classic Program.** CIG supports the development of new tools, approaches, practices, and technologies to further natural resource conservation on private lands. CIG partners work to address our nation's water quality, air quality, soil health, and wildlife habitat challenges, while improving agricultural operations. Projects should stimulate the development and adoption of innovative conservation approaches and technologies in conjunction with agricultural production and may be between 1 and 3 years in duration. **Applications due 11 October.**

**USDA Accepting Applications to Help Cover Costs of Organic, Transitioning Producers.** Transitioning to organic farming may be one way for farmers to combat the climate crisis. Organic farming can help with carbon sequestration by improving soil health. This fund will help farmers cover fees associated with organic certification. **Applications due 31 October.**